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November 22, 1996

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W.
Room 222
Washington, DC 20554

Re: MM Docket No. 87-268

Dear Mr. Caton:

Transmitted herewith, on behalf of WHDH-TV, Inc., are an original and nine copies of its "Separate Comments of WHDH-TV, Inc.", filed in response to the Commission's Sixth Notice of Rulemaking in the above-referenced matter.

In the event there are any questions concerning this matter, please contact the undersigned.

Very truly yours,



Arthur B. Goodkind

Enclosure

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Before the
Federal Communications Commission
Washington, D.C. 20554

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COMMUNICATIONS SECTION
GENERAL INVESTIGATIVE
DIVISION

In the Matter of)
)
Advanced Television Systems)
and Their Impact Upon the) MM Docket No. 87-268
Existing Television Broadcast)
Service)

TO: The Commission

SEPARATE COMMENTS OF WHDH-TV, INC.

WHDH-TV, Inc. ("WHDH"), by its attorneys, hereby files its separate comments in response to the Sixth Notice of Rule Making in the above-captioned proceeding.

WHDH, the licensee of WHDH-TV, Boston, Massachusetts, is a wholly owned subsidiary of Sunbeam Television Corporation. Sunbeam is one of the many broadcast company signatories to the joint comments being filed today in this proceeding by the Broadcasters Caucus and others (the "Broadcasters" comments). WHDH fully supports the positions taken in the joint Broadcasters comments and files these separate comments only to highlight one point that will be of great importance in the transition of WHDH-TV to digital broadcasting.

WHDH-TV presently operates on Channel 7. In the proposed table of DTV allotments issued with the FCC's Sixth Further Notice, the Commission had proposed a channel 65 DTV allotment for WHDH-TV. In the "Modified DTV Table" submitted with the Broadcasters' comments, on the other hand, a Channel 23 DTV allotment is proposed. WHDH strongly supports the Channel 23 proposal in the Broadcasters' Modified Table. As shown in the attached Engineering Statement of Jules Cohen, P. E., use of Channel 23 rather than Channel 65 will permit a much more efficient use of resources.

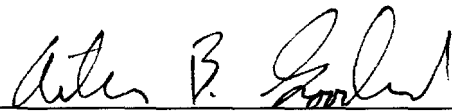
Channel 23 would require significantly less radiated power than would Channel 65 to replicate WHDH-TV's existing service. Such lower power would not only permit the use of a smaller transmitter with lower energy consumption, but would also permit the use of coaxial cable transmission line rather than the waveguide that would be required for a high power Channel 65 operation. Use of a waveguide rather than coaxial cable would increase substantially the wind loading of WHDH-TV's tower. See Engineering Statement, pp. 2-3.

Although no definitive tower loading studies have yet been conducted, preliminary discussions between WHDH-TV's Director of Engineering and representatives of Structural Systems Technology, Inc., the tower company utilized by WHDH, have led WHDH-TV's Engineering Director to conclude that a full power Channel 65 DTV operation at WHDH-TV's present site would very likely require a complete replacement of the existing tower. See attached Declaration of James Shultis. A Channel 23 operation designed to achieve the same coverage, on the other hand, could in all likelihood be accommodated on the existing WHDH-TV tower.

Accordingly, WHDH strongly supports the Channel 23 DTV allotment proposed in the Broadcasters' proposed Modified DTV Table.

Respectfully submitted,

WHDH-TV, INC.

By: 
Arthur B. Goodkind

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November 22, 1996

**ENGINEERING STATEMENT ON BEHALF OF
WHDH-TV, INC.
IN SUPPORT OF COMMENTS
SIXTH FURTHER NOTICE OF PROPOSED RULE MAKING
MM DOCKET NO. 87-268**

This engineering statement was prepared on behalf of WHDH-TV, Inc., licensee of television broadcast station WHDH-TV, Boston, Massachusetts, in support of comments directed to the Sixth Further Notice of Proposed Rule Making in the matter of Advanced Television Systems and Their Impact on the Existing Television Broadcast Service. The statement is directed specifically to a request by WHDH-TV that channel 23 be allotted to Boston, as proposed in the Broadcasters' Comments and assigned to WHDH-TV for use in the digital broadcast service.

The present NTSC operation of WHDH-TV is on channel 7 with peak visual effective radiated power of 316 kilowatts and height above average terrain of 306 meters. In Appendix B to the Sixth Further Notice, the Commission has proposed that channel 65 be assigned to WHDH-TV with average effective radiated power of 1677.4 kilowatts and height above average terrain of 306 meters. Population to be served by the digital facility during the transition period is calculated by the Commission to be 6,584,000.

Jules Cohen, P.E.
Consulting Engineer

Engineering Statement
WHDH-TV, Boston, Massachusetts

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The table of allotments/assignments being submitted in the Broadcasters' Comments proposes the use of channel 23 by WHDH-TV with effective radiated power of 561.1 kilowatts¹. The population, calculated by the Broadcasters, to be served by the WHDH-TV digital operation is 6,652,000. The one percent differential in the two population counts is not considered to be significant, and is certainly not the basis for the requested assignment of channel 23 for WHDH-TV; however, the close agreement between FCC and Broadcasters' counts shows that a service penalty is not imposed on use of the lower channel.

Use of channel 23 rather than channel 65 is a more efficient use of resources. For receiving antennas of equal gain, the amount of power extracted from a field is proportional to the square of the wavelength. At channel 65, the wavelength is approximately 0.39 meter. At channel 23, the wavelength is approximately 0.57 meter. With equal field strengths and receiving antenna gains, the channel 23 antenna extracts from the ambient field over twice as much power as the channel 65 antenna. In addition, line losses between antenna and receiver are greater on the upper channel.

The consequence of the foregoing is that less transmitted power is required on channel 23 than on channel 65 to achieve the same degree of service.

¹ It is recognized that part of the differential in power between the FCC and Broadcasters' proposals is a result of the use of a lower receiver noise figure by the Broadcasters.

Jules Cohen, P.E.
Consulting Engineer

Engineering Statement
WHDH-TV, Boston, Massachusetts

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Use of the lower channel by WHDH-TV would provide a number of benefits that would make the installation more cost effective, and may even avoid the need to build a new tower. The lower power on channel 23 means not only the use of a smaller transmitter with less energy consumption, but also permits the use of coaxial cable presenting less wind loading than the waveguide required for high power UHF operation on channel 65. Large diameter coaxial cable is not permitted for use on the upper UHF channels. For instance, an 8-3/16" line may not be used above channel 56 and a 9-3/16" line may not be used above channel 40. At the higher channels, the only recourse for high power is waveguide, but that increases substantially the wind loading of a tower and can make the difference between adding a new antenna and transmission line to an existing tower and facing the need to erect a new, much stronger tower.

For the foregoing reasons, WHDH-TV urges that the Commission adopt the Broadcasters' proposal to assign channel 23 to WHDH-TV rather than channel 65.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on November 15, 1996.

A handwritten signature in cursive script, reading "Jules Cohen".

Jules Cohen, P.E.

12/08 '96 17:03

ID:WHDH TV CANNEL 7

FAX:6172485423

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FROM KOTEN & NAFTALIN

11.19.1996 15:19

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DECLARATION OF JAMES SHULTIS

I am a Vice President and the Director of Engineering for WHDH-TV, Inc., licensee of WHDH-TV, Boston, Massachusetts.

I have reviewed the "Separate Comments of WHDH-TV, Inc., prepared for filing November 22, 1996 in response to the FCC's Sixth Notice of Rule Making concerning advanced television. Those comments correctly describe my conversations with representatives of our tower company and my tentative conclusions with respect to the load bearing capacity of our tower.

I declare under penalty of perjury that the foregoing is true and correct.


James Shultis

11/19/96
(Date)